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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,687	01/14/2002	Jingo Nakanishi	57454-315	9036

20277 7590 07/15/2003

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EXAMINER

NGUYEN, MINH T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 07/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n No.

10/030,687

Applicant(s)

NAKANISHI, JINGO

Examiner

Minh Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-18 and 20 is/are pending in the application.
- 4a) Of the above claim(s) 5-18 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3 and 4 is/are allowed.
- 6) ☒ Claim(s) 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

1. Applicant's amendment filed on 6/12/03 has been received and entered in the case. Claims 3-18 and 20 are pending and claims 5-18 are withdrawn from consideration. Claims 3-4 are allowed. Claim 20 is rejected for the reasons set forth below. This action is FINAL.

#### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Clock Synchronizer Having Current Supply in a PLL Circuit.

3. The disclosure is objected to because of the following informalities: the summary of invention section and its header are missing.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

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has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claim 20 is rejected under 35 U.S.C. 102(e) as being anticipated by US Patent No. 6,385,265, issued to Duffy et al.

As per claim 20, Duffy discloses a clock synchronizer (Fig. 3) generating a second clock signal (VCO\_CLK) synchronized with a first clock signal (CLK), comprising:

a phase difference detection circuit (102) detecting a phase difference between said first and second clock signals (CLK, VCO\_CLK), and setting a control signal (PUMPUP, PUMPDN) to be at an activated level for a time period corresponding to the phase difference;

a loop filter (110) including a resistance element (column 3, lines 12-15) and a capacitor (also see column 3, lines 12-15) connected between a predetermined node FILTU and a line of a reference potential GND;

a current-supply circuit (106 and 104) supplying current to said loop filter (110) in response to said control signal (PUMPUP, PUMPDN) from said phase difference detection circuit (102); and

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a clock generating circuit (109) generating said second clock signal (VCO\_CLK) in accordance with a potential of said predetermined node FILTU;

said current-supply circuit (circuits 104 and 106) including

a transistor (166a, Fig. 4) whose input electrode receives a control potential (CM\_PBIAS),

a switching circuit (transistor 170a) connecting said transistor (166a) between a line of a power-supply potential (the power supply VCC) and said loop filter (110), in response to that said control signal (PUMPUP, PUMPDN) is set to be at an activated level, and

a control circuit (104) controlling said control potential (CM\_PBIAS) such that predetermined constant current flows through said transistor (166a) connected between the line of said power-supply potential VCC and said loop filter (110), based on a potential (VC') of a node between said resistance element and a capacitor (this limitation is met because Duffy's loop filter 110 comprises resistors and capacitors, column 3, lines 12-15, clearly there are connections between resistors and capacitors, a potential of one of these nodes reads on the recited potential VC').

### ***Response to Arguments***

5. Applicant's arguments filed 6/12/03 have been fully considered but they are not persuasive.

Regarding the argument the response to the restriction requirement filed on 2/12/03, not 2/13/02. The Applicant is correct, the record shows that the response filed on 2/12/03.

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Regarding the argument PCT Rule 5.1 does not require the summary of invention section and its header. The Applicant is invited to provide argument regarding MPEP 1302.01, specifically, form paragraph 13.07, i.e., "Applicant is *required* to .." for consideration.

Regarding the argument Duffy does not disclose the limitation the control circuit controls the potential based on a potential of a node between the resistance element and the capacitor. The Examiner disagrees. The following facts are seen from the Duffy reference:

a) loop filter 110, which comprises resistance element and capacitor (column 3, lines 12-15), has the effect on the signals FILTU and FILTD (i.e., the potential levels of FILTU and FILTD are changed when the loop filter 110 is connected).

b) since the resistance element and the capacitor must be connected in the loop filter 110, there exists a node between these elements and there exists a potential at this node.

c) a) and b) => there is a direct relationship between the potential at the node in b) and the potential levels of the signals FILTU and FILTD.

d) the potential levels of FILTU and FILTD control the CM\_PBIAS signal.

e) combination of a), b), c) and d) shows there is a direct relationship between the potential at the node between the resistance element and the capacitor and the control potential CM\_PBIAS to the gate of the recited transistor, or in other words, the control circuit (104) controls the potential (of the signal CM\_PBIAS) based on a potential of a node between the resistance element and the capacitor (in the loop filter 110).

The Examiner further notes that the language of the claim *does not require there is a direct connection between the node and the control circuit.*

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The Examiner further notes that even this language is included, claim 20 can still be rejected based on US Patent No. '326, Fig. 6 (a copy of this reference was included and cited in the previous Office Action).

***Allowable Subject Matter***

6. Claim 3-4 are allowed for the reasons noted in the previous Office Action.

***Conclusion***

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh Nguyen whose telephone number is 703-306-9179. The examiner can normally be reached on Monday, Tuesday, Thursday, Friday 7:00-5:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Callahan can be reached on 703-308-4876. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.



Minh Nguyen  
Primary Examiner  
Art Unit 2816

MN  
July 12, 2003